

REMARKS

Entry of the foregoing and reexamination and reconsideration of the subject application, as amended, pursuant to and consistent with 37 C.F.R. § 1.112, are respectfully requested in light of the remarks which follow.

By the foregoing amendment, the specification has been amended to insert the paper copy of the substitute Sequence Listing attached hereto. Additionally, claims 1, 5, 18, 22, 33 and 34 have been amended and new claims 44 and 45 have been added. Support for the amendments to claims 1 and 18 can be found throughout the originally filed application including, for example, the sequence listing. Support for the amendment to claims 5 and 22, as well as new claims 44 and 45, can be found on at least pages 5-7 of the specification. Support for the amendments to claims 33 and 34, which simply recite "[a]n isolated host cell . . .", is inherent from the teachings of the entire specification. Thus, no new matter has been added. Further, by the present amendment, claims 37-43 have been canceled without prejudice or disclaimer to the subject matter recited therein. Applicants reserve the right to file a continuation or divisional application directed to any of the canceled subject matter.

Turning now to the Official Action, the Examiner has identified a minor error in the Sequence Listing with regard to SEQ ID NO:6. The amendment filed on June 1, 2001 has also been objected to under 35 U.S.C. § 132 because of the inadvertent error in SEQ ID NO:6. Attached hereto, in both paper and computer readable form, is a substitute Sequence Listing which corrects the inadvertent error.

Applicants acknowledge the Examiner's statement, on page 19 of the Official Action, that claims 31, 32 and 36 are allowed. Moreover, the Examiner noted that claims 33 and 34 would also be allowable if they were amended to recite "[a]n isolated host cell" As

mentioned above, claims 33 and 34 have been amended as suggested by the Examiner. Thus, claims 33 and 34 should be considered allowable.

Claims 1, 5-9, 18, 22-26, and 38-43 have been rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing new matter.¹ This rejection is respectfully traversed

In particular, claims 37, 39, 41, and 43 have been rejected as purportedly containing new matter regarding the error in SEQ ID NO:6 of the Sequence Listing. It is noted that these claims have been canceled without prejudice or disclaimer thereby rendering the Examiner's rejection in this regard moot. Nonetheless, as discussed above, the sequence listing for SEQ ID NO: has herein been corrected.

As to claims 1, 5-9, 18, 22-26, 38-42, the Examiner has argued that the specification does not appear to contemplate the genus of isolated genes from the family *Scrophulariales*. The Examiner has indicated that the identification of *Antirrhinum majus* as a member of this family is insufficient to provide written description of nucleic acids from any and all other family members. Applicants respectfully disagree. However, to expedite prosecution in the present application and not to acquiesce to the Examiner's rejection, claims 1 and 18 have been amended to recite that gene and nucleic acid, respectively, are obtained from *Antirrhinum*.

In view of the above, the Examiner is respectfully requested to withdraw the new matter rejection pursuant 35 U.S.C. § 112, first paragraph.

Claims 37, 39, 41, and 43 have been rejected under 35 U.S.C. § 112, second paragraph, as indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. This rejection is respectfully

¹ While the Examiner did not include claim 37 in the statement of rejection, claim 37 was noted during the discussion of such rejection as allegedly containing new matter for the error in connection with SEQ ID NO:6.

traversed. However, to expedite prosecution in the present application and not to acquiesce to the Examiner's rejection, claims 37, 39, 41 and 43 have been canceled without prejudice or disclaimer. Thus the Examiner's rejection is moot. Accordingly, withdrawal of the rejection under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Claims 1, 5-9, 18, 21-30, 33-35, and 37-43 have been rejected under 35 U.S.C. § 112, first paragraph, because the specification allegedly does not reasonably provide enablement for nucleic acids other than those encoding a protein having activity to synthesize aureusidin by using chalcones as substrates, wherein the nucleic acid comprises a sequence encoding SEQ ID NO:2. This rejection is respectfully traversed.

When rejecting a claim under the enablement requirement of section 112, the Examiner bears the initial burden of setting forth a reasonable explanation as to why it believes that the scope of protection provided by that claim is not adequately enabled by the description of the invention provided in the specification of the application; this includes, of course, providing sufficient reasons for doubting any assertions in the specification as to the scope of enablement. *In re Wright*, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993). Here the Examiner has provided no evidence or sound scientific reasoning to satisfy this burden.

The currently pending claims, using claims 1 and 18 as examples, are specifically directed to an isolated gene or nucleic acid encoding a protein having activity to synthesize aurones using chalcones as substrates, wherein said gene or nucleic acid is obtained from *Antirrhinum*.

Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. The "key" word is undue, not experimentation. As discussed previously on the record, the specification, on for instance page 7, line 37 through page 8, line 11 and page 8,

line 34 though page 9, line 6, does describe how one skilled in the art could select nucleic acids having the ability to synthesize auresusidin or any other aurone using chalcones as substrates. Thus, the specification describes and provides reasonable enablement to permit one of skill in the art to make and use the full scope of the currently pending claims.

In view of the above, the Examiner is respectfully requested to withdraw the enablement rejection pursuant to 35 U.S.C. § 112, first paragraph.

Claims 1, 5-9, 18, 21-30, 35, and 37-43 have been rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was allegedly not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors had possession of the claimed invention at the time the application was filed. This rejection is respectfully traversed.

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. *See, e.g., In re Kaslow*, 217 U.S.P.Q. 1059, 1076 (Fed. Cir. 1983); *Ex parte Remark*, 15 U.S.P.Q.2d 1498, 1506 (PBAI 1990). It is not necessary that the claimed subject matter be described identically, but the disclosure originally filed must convey to those skilled in the art that applicant had invented the subject matter later claimed.

As discussed above currently pending claims 1 and 18, for example, are specifically directed to an isolated gene or nucleic acid encoding a protein having activity to synthesize aurones using chalcones as substrates, wherein said gene or nucleic acid is obtained from *Antirrhinum*.

The specification of the present application provides the coding portion of the nucleic acid encoding SEQ ID NO:2. The specification also states that the "gene for this aurone synthase, which synthesizes aurones by using chalcones as substrates, was obtained from a cDNA library prepared from the petal of snapdragon, based on the partial amino acid sequences as described above." Page 3, lines 4-8, of the specification. A "gene" is described in the specification and one skilled in the art would know how to obtain the full length gene using the sequences identified in the specification. Genes of the invention are also described as being obtainable by hybridization with nucleic acid having the nucleotide sequence of SEQ ID NO:1 under stringent conditions. Page 6, lines 17-34, of the specification. The specification further states that "to obtain a genomic DNA, a genomic DNA library is prepared from snapdragon in accordance with a conventional method, and this is then screened in accordance with a conventional method by cDNA or its fragment." Page 7, lines 20-28, specification. The specification further states at from page 7, line 37 - page 8, line 11:

Naturally-occurring genes, that hybridize with nucleic acid having the nucleotide sequence described in SEQ ID NO. 1 and that encodes an enzyme having activity to synthesize aurones by using chalcones as substrates, are obtained by preparing a cDNA library or genomic DNA library from a plant which has ability to produce a protein having aurone synthase activity in accordance with a conventional method, and then screening the library by using, for example, cDNA or its fragment having the nucleotide sequence shown in SEQ ID NO. 1 as a probe. The above-mentioned conditions can be used for the hybridization at this time.

This description shows that applicants had possession of the claimed gene. By describing a "gene" and by describing how the "gene" is obtained, one skilled in the art could readily obtain the complete genomic sequence. Applicants' description thus shows possession of the genomic sequence at the time the application was filed.

In view of the above, the Examiner is respectfully requested to withdraw the written description rejection pursuant to 35 U.S.C. § 112, first paragraph.

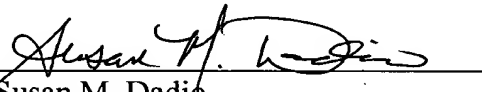
In view of the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited

In the event that there are any questions relating to this Amendment and Reply, or the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

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